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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,197	07/17/2003	Barton James Jenson	35026.001	3954

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EXAMINER

DHARIA, PRABODH M

ART UNIT PAPER NUMBER

2673

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,197	Applicant(s) JENSON ET AL.	
	Examiner Prabodh M Dharia	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,7,11 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonald (5,212,471).

Regarding Claim 1, McDonald teaches a visual display system (Col. 1, Lines 13-19) comprising: a display light source that transmits an image in at least partially polarized light (Col. 1, Lines 40-49); and a combiner that transmits light from a field of vision behind the combiner to a viewer in front of the combiner, the combiner reflecting a first portion of the light to superimpose the image as a virtual image within the transmitted field of vision, rotating the polarization of a second portion of the light (Col. 1, Lines 40-56, Col. 3, Lines 5-22), and transmitting the second portion of the light, the second portion of the light therefore having low efficiency for reflection towards the viewer from optical boundaries encountered by the second portion of the light following rotation of the plane of polarization by the combiner (Col. 2, Line 23-64, Col. 3, Lines 5-25).

Regarding Claim 2, McDonald teaches the light is s-polarized, and the polarization of the light is rotated by the combiner to produce p-polarized light (Col. 3, Lines 5-25).

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Regarding Claim 7, McDonald teaches a head-up display, providing a primary virtual image of an automotive gauge with only attenuated ghost images (Col. 2, lines 65-68).

Regarding Claim 11, McDonald teaches a head-up display to allow a viewer to wear-polarized sunglasses (Col. 3, Line 55 to Col. 4, Line 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3,4,8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald (5,212,471) in view of Weber et al. (US 2004/0135742 A1).

Regarding Claim 3, McDonald teaches the light is s-polarized, and the polarization of the light is rotated by the combiner to produce p-polarized light (Col. 3, Lines 5-25).

However, McDonald fails to teach the combiner consists of a birefringent material.

However, Weber et al. teaches the combiner consists of a birefringent material (page 4, paragraphs 41,42).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Weber et al. in McDonald teaching for having a high contrast image display that uses polarizing beam splitter to function to input beam and fold light path.

Regarding Claim 4, Weber et al. teaches the combiner is coated with a birefringent film (page 5, paragraphs 41,42).

Regarding Claim 8, Weber et al. a head-up display, providing a primary virtual image of an automotive gauge with no ghost images (page 3, paragraph 30, page 1, paragraph 6).

5. Claims 5,6,10,12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald (5,212,471) in view of Ferrante ((5,576,886).

Regarding Claim 5, McDonald teaches the light is s-polarized, and the polarization of the light is rotated by the combiner to produce p-polarized light (Col. 3, Lines 5-25).

However, McDonald fails to teach the combiner is coated with a dielectric film.

However, Ferrante teaches the combiner is coated with a dielectric film (Col. 5, Line 66 to Col. 6, Line 9).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Ferrante in McDonald teaching for having a high contrast image display that holographic combiner and achieves desired reflective and transmissive characteristics.

Regarding Claim 6, Ferrante teaches the combiner is coated with a metallic film (Col. 4, Lines 45-47).

Regarding Claim 10, Ferrante teaches a relay optic that rotates the polarization of the reflected, first portion of the light (Col. 1, Lines 6-16).

Regarding Claim 12, McDonald teaches the visual display system wherein the display light source is selected from among: a display projection system utilizing a light guide, diffuser, liquid crystal display, and transmitting window; a vacuum fluorescent display; a laser or light emitting diode combined with a scanning mirror; a laser or light emitting diode combined with a number of lasers, LEDs, and scanning mirrors; a laser or LED combined with scanning lenses; and an array of LEDs that together compose a graphical or textual display (Col. 4, Lines 6-58).

However, McDonald fails to recite the display projection system.

However, Ferrante recite the display projection system (Col. 1, Lines 6-16).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Ferrante in McDonald teaching for having a high contrast image display that holographic combiner and achieves desired reflective and transmissive characteristics.

Regarding Claim 13, McDonald teaches a visual display system (Col. 1, Lines 13-19) comprising: a display light source that transmits an image in at least partially polarized light (Col. 1, Lines 40-49); and a combiner that transmits light from a field of vision behind the combiner to a viewer in front of the combiner, the combiner reflecting a first portion of the light to superimpose the image as a virtual image within the transmitted field of vision, rotating the

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polarization of a second portion of the light (Col. 1, Lines 40-56, Col. 3, Lines 5-22), and transmitting the second portion of the light, the second portion of the light therefore having low efficiency for reflection towards the viewer from optical boundaries encountered by the second portion of the light following rotation of the plane of polarization by the combiner (Col. 2, Line 23-64, Col. 3, Lines 5-25).

However, McDonald fails to teach the combiner is coated with a metallic film.

However, Ferrante teaches the combiner is coated with a metallic film (Col. 4, Lines 45-47).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Ferrante in McDonald teaching for having a high contrast image display that holographic combiner and achieves desired reflective and transmissive characteristics.

Regarding Claim 14, McDonald teaches a head-up display to allow a viewer to wear p-polarized sunglasses (Col. 3, Line 55 to Col. 4, Line 5).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDonald (5,212,471) in view of Knockeart et al. (US 2002/0069071 A1).

Regarding Claim 9, McDonald teaches the light is s-polarized, and the polarization of the light is rotated by the combiner to produce p-polarized light (Col. 3, Lines 5-25).

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However, McDonald fails to teach an application selected from among: a speech prompt display; a see-through projection display; and a head-up display in a vehicle.

However, Knockeart et al. teaches an application selected from among: a speech prompt display; a see-through projection display; and a head-up display in a vehicle (page 3, paragraphs 45,46).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Knockeart et al. in McDonald teaching for having a combined manual and spoken interface telematics system which reduces visual distraction works reliably at very low cost.

7. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrante ((5,576,886) in view of McDonald (5,212,471).

Regarding Claim 15, Ferrante teaches a method for superimposing a virtual image within a field of vision (Col. 4, Lines 12-19), the method comprising: transmitting an image in an at least partially polarized light from a display light source (Col. 4, Lines 28-31); transmitting light from a field of vision behind a combiner to a viewer in front of the combiner (Col. 4, Lines 28-31); reflecting a first portion of the light from the combiner to superimpose the image as a virtual image within the transmitted field of vision (Col. 4, Lines 12-19, 28-31).

However, Ferrante fails to recite rotating the polarization of a second portion of the light within the combiner; and transmitting the second portion of the light through the combiner.

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McDonald teaches and recites rotating the polarization of a second portion of the light within the combiner; and transmitting the second portion of the light through the combiner (Col. 3, Lines 5-45).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of McDonald in Ferrante teaching for having a head up display for vehicles' and which provides for reduced ghost image intensity.

Regarding Claim 16, McDonald teaches provide a head-up display (Col. 1, lines 8-11).

Regarding Claim 17, Ferrante recite the display projection system (Col. 1, Lines 6-16).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrante (5,576,886) in view of McDonald (5,212,471) as applied to claims 15-17 above, and further in view of Knockeart et al. (2002/0069071 A1).

Regarding Claim 18, Ferrante teaches a method for superimposing a virtual image within a field of vision (Col. 4, Lines 12-19), the method comprising: transmitting an image in an at least partially polarized light from a display light source (Col. 4, Lines 28-31); transmitting light from a field of vision behind a combiner to a viewer in front of the combiner (Col. 4, Lines 28-31); reflecting a first portion of the light from the combiner to superimpose the image as a virtual image within the transmitted field of vision (Col. 4, Lines 12-19, 28-31).

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However, Ferrante modified by McDonald fails to teach an application selected from among: a speech prompt display; a see-through projection display; and a head-up display in a vehicle.

However, Knockeart et al. teaches an application selected from among: a speech prompt display; a see-through projection display; and a head-up display in a vehicle (page 3, paragraphs 45,46).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Knockeart et al. in Ferrante modified by McDonald teaching for having a combined manual and spoken interface telematics system which reduces visual distraction works reliably at very low cost.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is informed that all of the other additional cited references either anticipate or render the claims obvious. In order to not to be repetitive and exhaustive, the examiner did draft additional rejection based on those references.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishikawa et al. (US 2002/0048058 A1) Head-UP Display system.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M Dharia whose telephone number is 703-605-1231.

The examiner can normally be reached on M-F 8AM to 5PM.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-3054938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

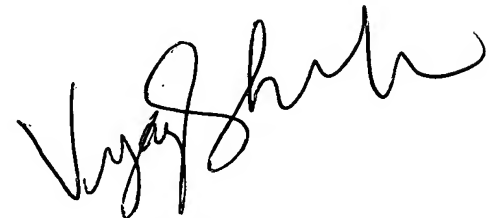
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Washington, D.C. 20231

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January 26, 2005



VIJAY SHANKAR
PRIMARY EXAMINER